Montana Department of Natural Resources and Conservation
Water Resources Division
Water Rights Bureau

ENVIRONMENTAL ASSESSMENT
For Routine Actions with Limited Environmental Impact

Part I. Proposed Action Description

Applicant/Contact name and address: **James E. and Lorraine H. Peterson**
501 Peterson Ranch Lane
Buffalo, MT 59418

1. Type of action: **Application for Beneficial Water Use Permit 41S 30150713**

2. Water source name: **Groundwater (Kootenai Formation)**

3. Location affected by project: **The point of diversion (well) is located in the NENESE, Section 2 T12N, R15E, and the place of use is the SWSWNW & W2W2SW Section 1, T12N, R15E, all in Fergus County.**

4. Narrative summary of the proposed project, purpose, action to be taken, and benefits:

The Applicant proposes to divert groundwater from the Third Cat Creek Member of the Kootenai Formation, by means of a 2,003-foot deep well, from January 1 through December 31, at a flow rate of 35 GPM and volume of up to 42.01 AF annually. The project is located about 10 miles north of Judith Gap, Montana. The groundwater well will supply a concentrated animal feedlot operation encompassing approximately 15 acres of land (place of use). The purpose of use is Stock, with an estimated average annual occupancy rate for the feedlot operation of 2,500 cattle.

The DNRC shall issue a water use permit if an applicant proves the criteria in 85-2-311 MCA are met.

5. Agencies consulted during preparation of the Environmental Assessment:
(include agencies with overlapping jurisdiction)

Dept. of Environmental Quality Website - TMDL 303d listing
Dept. of Environmental Quality Website – Clean Water Act Information Center
MT. National Heritage Program Website - Species of Concern
USDI Fish & Wildlife Service Website - Endangered and Threatened Species
MT State Historic Preservation Office - Archeological/Historical Sites
USDA Natural Resources Conservation Service – Web Soil Survey
USDI Fish & Wildlife Service – Wetlands Online Mapper
Montana Fish, Wildlife & Parks – MFISH Website

Part II. Environmental Review

1. Environmental Impact Checklist:

PHYSICAL ENVIRONMENT

WATER QUANTITY, QUALITY AND DISTRIBUTION

Water quantity *- Assess whether the source of supply is identified as a chronically or periodically dewatered stream by DFWP. Assess whether the proposed use will worsen the already dewatered condition.*

Determination: **No significant impact.**

The source of water is Kootenai Formation groundwater and as such, the source is not identified as a chronically or periodically dewatered stream by DFWP. The area of potential impact to surface waters from the groundwater appropriation is estimated to be over a regional scale and manifest in the lower reaches of the Judith River and the Missouri River; neither stream is identified as a chronically or periodically dewatered by DFWP.

Water quality *- Assess whether the stream is listed as water quality impaired or threatened by DEQ, and whether the proposed project will affect water quality.*

Determination: **No significant impact.**

The source of supply for this proposed appropriation is groundwater from the Kootenai Aquifer and no impacts to water quality are anticipated from this project.

Groundwater *- Assess if the proposed project impacts ground water quality or supply. If this is a groundwater appropriation, assess if it could impact adjacent surface water flows.*

Determination: **No significant impact.**

This proposed groundwater appropriation is from the Kootenai Aquifer for a flow rate of 35 GPM and volume of up to 42.01 AF per year. The Judith and Missouri Rivers are both considered hydraulically connected to the Kootenai Aquifer on a regional scale and groundwater depletions from this well could eventually affect flows in the lower reaches of the Judith and down gradient areas on the Missouri. The Departments' physical availability vs. legal demands analysis, shows water is legally available in the lower reaches of the Judith River in all months requested for appropriation. See Preliminary Determination in permit file for more information. No significant impacts to groundwater quantity or quality are anticipated because of this project.

DIVERSION WORKS *- Assess whether the means of diversion, construction and operation of the appropriation works of the proposed project will impact any of the following: channel impacts, flow modifications, barriers, riparian areas, dams, well construction.*

Determination: **No significant impact.**

Water will be appropriated by a groundwater well completed into the Kootenai Aquifer at a depth of 2,003 feet. Water from the well will be pumped at a flow rate of 35 GPM to supply stock tanks in the feedlot. The diversion works involves an existing well and is not expected to have a significant impact to stream channel flows, barriers, riparian zones, dams or other wells.

UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES

Endangered and threatened species *- Assess whether the proposed project will impact any threatened or endangered fish, wildlife, plants or aquatic species or any "species of special concern," or create a barrier to the migration or movement of fish or wildlife. For groundwater, assess whether the proposed project, including impacts on adjacent surface flows, would impact any threatened or endangered species or "species of special concern."*

Determination: **No significant impact.**

The Montana National Heritage Program lists four species as Species of Concern within T12N R15E. The species on the list include three bird species, the Ferruginous Hawk, Baird's Sparrow and Long-billed Curlew as well as the Little Brown Myotis (bat). One Potential Plant Species of Concern is listed in the area of interest, Slender Wedgegrass.

Updated on January 25, 2021, the USDI Fish & Wildlife Service Website shows that Fergus County has three species listed as endangered, threatened or proposed related to the Endangered Species Act. The endangered species is the Pallid Sturgeon, while the threatened species is the Canada Lynx and the proposed species is the Whitebark Pine.

This project is not expected to impact any species mentioned above as the project appropriates Kootenai Formation groundwater from an existing well. Proposed water use for the project involved in this application process should not negatively impact any species listed above.

The proposed project is not located in general sage grouse habitat and therefore the Applicants do not have to consult with the Sage Grouse Habitat Conservation Program or obtain a letter regarding the consultation.

Wetlands *- Consult and assess whether the apparent wetland is a functional wetland (according to COE definitions), and whether the wetland resource would be impacted.*

Determination: **No significant impact.**

The National Wetlands Inventory does show a few freshwater emergent type wetlands about 0.15 miles to the east of the proposed place of use along Ross Fork Creek. Assuming the concentrated cattle operation will be contained in the feedlot and not allowed access to the riparian zone adjacent to Ross Fork Creek, this development is not expected to cause any adverse impacts to wetland areas.

Ponds **-** *For ponds, consult and assess whether existing wildlife, waterfowl, or fisheries resources would be impacted.*

Determination: **No significant impact.**

Other than the Applicants' Thermosink Double Bowl stock waterers in each pen, there is no storage or ponds associated with this project.

GEOLOGY/SOIL QUALITY, STABILITY AND MOISTURE - *Assess whether there will be degradation of soil quality, alteration of soil stability, or moisture content. Assess whether the soils are heavy in salts that could cause saline seep.*

Determination: **No significant impact.**

The USDA-NRCS Web Soil Survey indicates the dominant soil unit for the area is Judith-Tamaneen clay loam. The sodium adsorption ratio is 0.0 indicating a low likelihood of impacts from saline seep.

It is expected that some short-term surface disturbance will occur during construction of new feedlot pens and stock waters, however no significant negative impacts to soils are expected because of this project.

VEGETATION COVER, QUANTITY AND QUALITY/NOXIOUS WEEDS - *Assess impacts to existing vegetative cover. Assess whether the proposed project would result in the establishment or spread of noxious weeds.*

Determination: **No significant impact.**

Other than short-term disturbances from the installation of feedlot infrastructure, no new impacts to vegetative cover are expected. It is the landowner's responsibility to control noxious weeds on their property.

AIR QUALITY - *Assess whether there will be a deterioration of air quality or adverse effects on vegetation due to increased air pollutants.*

Determination: **No significant impact.**

No impacts to air quality are expected; the pump in the well will be powered by an electric motor.

HISTORICAL AND ARCHEOLOGICAL SITES - *Assess whether there will be degradation of unique archeological or historical sites in the vicinity of the proposed project if it is on State or Federal Lands. If it is not on State or Federal Lands simply state NA-project not located on State or Federal Lands.*

Determination: **No significant impact.**

Not Applicable – The proposed project is not located on State or Federal Lands.

DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AND ENERGY - *Assess any other impacts on environmental resources of land, water and energy not already addressed.*

Determination: **No significant impact.**

The concentrated animal feeding operation will be regulated by MT DEQ and no significant impacts are expected from the proposed water use. There may be a slight increase in electrical energy consumption associated with pump operations.

HUMAN ENVIRONMENT

LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS - *Assess whether the proposed project is inconsistent with any locally adopted environmental plans and goals.*

Determination: **No significant impact.**

No local environmental plans or goals have been identified.

ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES - *Assess whether the proposed project will impact access to or the quality of recreational and wilderness activities.*

Determination: **No significant impact.**

The proposed action is located on private property and is not expected to negatively affect recreational or wilderness activities in the area.

HUMAN HEALTH - *Assess whether the proposed project impacts on human health.*

Determination: **No significant impact.**

No significant adverse impacts to human health are expected, the concentrated animal feeding operation will be regulated by MT DEQ.

PRIVATE PROPERTY - *Assess whether there are any government regulatory impacts on private property rights.*
*Yes__ No_**X**__ If yes, analyze any alternatives considered that could reduce, minimize, or eliminate the regulation of private property rights.*

Determination: **No significant impact.**

No regulatory impacts from water right permitting are anticipated.

OTHER HUMAN ENVIRONMENTAL ISSUES - *For routine actions of limited environmental impact, the following may be addressed in a checklist fashion.*

Impacts on:

(a) *Cultural uniqueness and diversity?* **None**

(b) *Local and state tax base and tax revenues?* **Increased tax revenues from finished cattle sales**

(c) *Existing land uses?* **Portion of Applicants' land will be converted to a feedlot**

(d) *Quantity and distribution of employment?* **Feedlot operation may require additional employees**

(e) *Distribution and density of population and housing?* **None**

(f) *Demands for government services?* **None**

(g) *Industrial and commercial activity?* **Feedlot will sell commercially fattened cattle**

(h) *Utilities?* **Pump will be powered by electric motors**

(i) *Transportation?* **Potential for increased truck traffic**

(j) *Safety?* **None**

(k) *Other appropriate social and economic circumstances?* **None**

2. *Secondary and cumulative impacts on the physical environment and human population:*

Secondary Impacts:

Secondary impacts from this project are expected to be minor; there will be year-round groundwater depletions to the Kootenai aquifer, and in turn the lower Judith and Missouri Rivers. The Departments' water availability analysis indicates there is water legally available for appropriation in the reach of the Judith River below its confluence with Wolf Creek, the reach anticipated to be affected by this groundwater project. In addition, the MT FWP instream flow reservation is met in all months on a median of the mean basis.

Cumulative Impacts:

As more development takes place in the Judith Basin area, there will be increased demands of water for domestic, irrigation, stock, recreation and other uses. This increased demand will eventually have a higher potential for impacts to existing water users.

3. *Describe any mitigation/stipulation measures:*

The Department may or may not deem specific conditions necessary to meet the statutory criteria for new permits set forth at § 85-2-311, MCA. These conditions would be required in the Departments' preliminary determination, if applicable.

4. *Description and analysis of reasonable alternatives to the proposed action, including the no action alternative, if an alternative is reasonably available and prudent to consider:*

No action alternative: Deny the permit application. This alternative would result in no benefits to the Applicant from the proposed project.

PART III. Conclusion

1. Preferred Alternative

The preferred alternative is the proposed alternative.

2 Comments and Responses

No comments related to water right permitting have been received as of this date.

3. *Finding:*
*Yes__ No_**X**_ Based on the significance criteria evaluated in this EA, is an EIS required?*

If an EIS is not required, explain <u>why</u> the EA is the appropriate level of analysis for this proposed action:

None of the identified impacts for any of the alternatives are significant as defined in ARM 36.2.524.

Name of person(s) responsible for preparation of EA:

Name: Douglas D. Mann
Title: Hydrologist
Date: May 12, 2021